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新データ収集システムを使った三ヵ国に於ける携帯電話使用比較

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Young people are early adopters of technology and this has been especially true for mobile telephones. In the world's three largest economies—America, Japan, and China—over 80% of young people have mobile phones. Understanding how young people in these countries are similar and different in their use of communication technologies in general and mobile phone in particular will become more important in an increasingly interdependent global economy. However, few studies exist that compare mobile telephone use in these countries. This summary presents the current project's background, progress, and future plans for researching mobile phone use by American, Japanese, and Chinese young people.

The original project design was to use a mobile telephone-based data collection tool developed by the researchers to study common communication problems in America, Japan, and China. The authors created this system—the Mobile Input and Data Access System or "MIDAS"—that presents online surveys that can be completed on any mobile phone with a Web browser. Data from completed questionnaires are automatically saved onto our server and are ready for analysis. MIDAS has been successfully used by Waseda undergraduate students to collect data for their senior theses and based on this preliminary success, the authors intended to use this system to collect data in America, Japan, and China. Actual use was somewhat different and will be discussed below.

The original project was divided into three, one-year stages: (1) Demographic data collection, (2) gender differences in mobile phone use, and (3) interpersonal distance in mobile phone use. It was thought one year was sufficient time for preparing questionnaires in three languages and collecting data in three countries. The reality was that data collection in multiple countries was more time-consuming than we had expected, especially in China where we had limited contacts. Despite some unexpected delays, data for all three stages were successfully completed on time.

Prior to analysis of the project data, the research group sponsored a round table discussion at an international conference to exchange ideas and approaches with our international colleagues (Scott, Liu, Kato, & Kato 2010). This session was well attended and provided useful feedback for the upcoming stages of our project.

Stage One focused on demographic data from all three target countries. Data were collected, input, and partially analyzed. A comparison of American and Japanese mobile phone use was presented at an international conference (Scott, Kato, Kato, & Liu, 2012). This study examined and compared university students' use of computers and mobile phones in Japan and the United States. One of the authors' primary assumptions was that American students primarily used PCs with some mobile phone use and Japanese students primarily used mobile phones with some PC use. Analysis was conducted and significant findings were found in four areas: Communication with friends, communication with family, PC-based communication, and mobile phone-based communication. When communicat-ing with friends, both American and Japanese students used text messaging more than other methods and there was no statistical difference in their use. However, American students showed statistically greater use in three areas (i.e. PC email, instant messaging (IM)/chat, and social networking). When communicating with family members, American students' use was significantly greater than Japanese student use in four areas (i.e. PC email, IM/chat, landline phone, and social networking). Examining media used, Americans used PCs significantly more in five areas (i.e. email, PC games, IM/chat, listening to music, and social networking) while Japanese students used one area significantly more (i.e. online shopping). Finally, analysis of mobile phone use showed Japanese students doing two activities significantly more than Americans (i.e. take photos/video and using the Internet/Internet search) while Americans did one activity significantly more (i.e. listening to music). These findings suggest that our assumption that Americans rely more on their PC to communicate was confirmed, although Japanese mobile phone use was less than expected. This paper represents the project's largest production to date although additional papers and articles are planned.

Stage Two's research focused on gender differences in mobile phone use between young people in the three target countries. Data collection in America and Japan was uneventful but collecting data in China proved to be more challenging. Our established contact at Shanghai University was extremely helpful

during the first year, but became busy during the second year. We were unable to obtain a sufficient number of completely questionnaires and needed to secure an additional research site. Fortunately, one of our team members had a contact in Jinan, China, and we were able to collect a sufficient sample to complete this Stage's research.

Stage Three examined how interpersonal distance impacts mobile phone communications. Data collection went smoothly, not only in America and Japan, but thanks to a new venue in China, all Chinese data were collected without incident.

One of the project's goals was to develop a mobile phone-based tool for data collection. The impetus for creating this tool was to address the lack of mobile phone-based questionnaire services. While we successfully created a basic data collection tool, three limits became evident: 1) Some potential participants' mobile phones were able to access the data collection tool, 2) some research sites (including in Japan) had insufficient mobile phone signal strength which prevented potential participants from accessing the online questionnaire, and 3) the number of people with the skills to develop mobile phone applications is very low and their talents are in high demand. Fortunately, we found three developments since the start of this project that may be useful in the future: 1) the rapid increase in smartphone use in all three countries which improves access to our online questionnaire, 2) expanding mobile phone coverage (especially on Japanese campuses) to reduce "no service" areas, and 3) the increased availability of professional services providing online questionnaires for a reasonable price. Although the current research project was somewhat hampered by limited mobile phone and infrastructure capacity, these limitations have largely been removed—thanks to smartphones and increased service areas—and we are optimistic about the future of mobile-phone based data collection.

Scott, D.J., Liu, S, Kato, Y., & Kato, S. (2010). Using Mobile Devices for Data Collection: Exchanging Ideas and Models. *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2010.* Chesapeake, VA: AACE.

Scott, D.J., Kato, Y., Kato, S., and Liu, S. (2012). Comparing Computer and Mobile Phone Use by American and Japanese University Students. *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2012.* Chesapeake, VA: AACE